Table of Contents

Chapter 1 Overview **1-1**
1.1 About ADSL 1-1
1.2 Features 1-1
1.3 Protocols 1-2
1.4 Cautions 1-2
1.5 Abbreviations 1-2

Chapter 2 Hardware Installation **2-1**
2.1 Packing List 2-1
2.2 Outlook 2-1
2.2.1 Indicator Status Introduction 2-2
2.2.2 Connector Introduction 2-2
2.3 System Requirements 2-2
2.4 Hardware Installation 2-3
2.4.1 External Splitter 2-3
2.4.2 Physical Level Link 2-4

Chapter 3 Software Installation **3-1**

Chapter 4 Installation Confirm **4-1**
4.1 Installation for Windows 2000 System 4-1
4.2 Additional Details for Windows 98 4-5

Chapter 5 Customizing Communication Setting **5-1**
5.1 Software Set up 5-1
5.2 Status Monitor 5-3

Chapter 6 Internet Access 6-1

6.1 Preparation 6-1

6.2 PPPoE Mode 6-1

6.3 Static IP Address Mode 6-10

6.4 Dynamical IP Address Assigning Mode 6-13

Chapter 7 Questions & Answers 7-1

Chapter 8 Software Uninstall 8-1

About This Manual

This manual provides a comprehensive user's guide and installation manual for SmartAX MT810 ADSL CPE. It has been organized in such a way to make it easy to follow by users worldwide. In order to ensure optimal comprehension, the following list provides brief descriptions of the formatting styles used throughout this manual.

Commands: Commands are always referred to by using the word "click" before them. These commands are always shown as bold-faced words. For example, click **Next,** click **OK**, or click **Cancel**.

Names of Windows (Dialog Boxes): The names of the windows (also referred to as dialog boxes) that appear on the PC screen are always referred to in quotes. For example, the "Setup Complete" window.

Names of Options in Windows: The names of options to choose from inside the windows that appear on the PC screen are always referred to in italics. For example, choose the *Yes, I want to restart my computer now* option from the window.

Notes: In some cases, preparatory or cautionary information is needed before proceeding onto the next step in an installation process. This kind of information is provided in the form of notes, which are always referred to in bold-faced and italicized letters. For example, ***Note: To access the Control Panel, the driver must be running. Also, make sure the USB cable is plugged into the modem.***

Chapter 1 Overview

1.1 About ADSL

Asymmetric Digital Subscriber Line (ADSL) technology provides high-speed data access across common phone lines (copper wires) by making use of previously unused frequency bandwidth above the voice band. ADSL signal uses different frequency from the voice signal. ADSL service is able to coexist with your telephone service on the same line. ADSL is asymmetric in the sense that it provides higher data rate in the downstream (receive) direction than in the upstream (transmit) direction. Asymmetric operation is ideal for home and small office use where files and information are downloaded more frequently than uploaded.

1.2 Features

- USB interface, Plug-and-Play
- Bus-powered, external power supply is not required
- Compatible with T1.413, G.dmt, G.lite and multimode
- Adjusts speed automatically
- Supports UBR/VBR/CBR ATM
- Provides DSL downstream data rates up to 8 Mbps, and upstream rates up to 1024 Kbps
- Supports Windows 2000, Windows ME, Windows XP and above Windows 98
- Windows GUI management
- Power consumption: less than 2W
- Operating Environment: 0 ^{O}C~+50 ^{O}C
- Weight: 100g

1.3 Protocols

- Complies with T1.413, G.dmt (G.992.1), G.lite (G.992.2)
- Complies with RFC1483
- Complies with USB1.1

1.4 Cautions

1) Do not connect the ADSL to the telephone line directly; it is recommended to connect it to the splitter's "MODEM" port.
2) Make sure the adapter does not have capacitances, diodes, etc.
3) MT810 is only for indoor use.
4) Always keep MT810 dry.
5) Keep away from high power consuming machine; avoid electromagnetic interference and heat.
6) This product has been designed to comply with the requirements on environmental protection. For the proper storage, use and disposal of this product, national laws and regulations must be observed.

1.5 Abbreviations

The following abbreviations can be referred in this manual:

Table 1-1 Abbreviation

ADSL	Asymmetry Digital Subscriber Line
ATM	Asynchronous Transfer Mode
CBR	Constant Bit Rate
CPE	Customer Premises Equipment

DNS	Domain Name Server
FTP	File Transfer Protocol
GUI	Graphical User Interface
IE	Internet Explorer
IP	Internet Protocol
ISP	Internet Service Provider
PPP	Point-to-Point Protocol
PPPoE	PPP-over-Ethernet
PVC	Permanent Virtual Circuit
TCP/IP	Transmission Control Protocol / Internet Protocol
UBR	Unspecified Bit Rate
USB	Universal Serial Bus
VCI	Virtual Circuit Identifier
VPI	Virtual Path Identifier
WAN	Wide Area Network

Chapter 2 Hardware Installation

2.1 Packing List

1)	SmartAX MT810 ADSL CPE	: 1 PCS
2)	Telephone Cable	: 2 PCS
3)	Splitter	: 1 PCS
4)	USB Cable	: 1 PCS
5)	User Manual	: 1 PCS
6)	Installation CD	: 1 PCS

2.2 Outlook

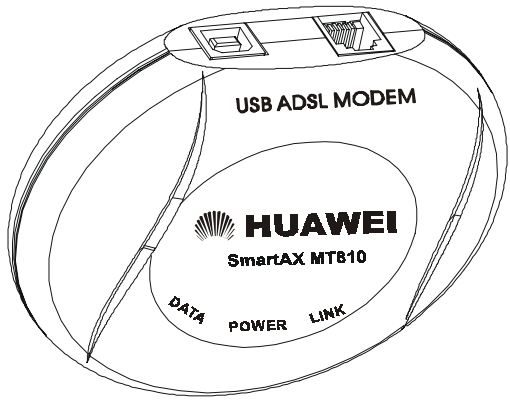


Figure 2-1 USB ADSL modem

2.2.1 Indicator Status Introduction

POWER	Red LED	On	Power on
LINK	Red LED	Flash	Trying to make connection
		On	Connect successfully
DATA	Red LED	Flash	There is data traffic over the line

2.2.2 Connector Introduction

1) LINE port: RJ-11 port connects MT810 to a splitter.
2) USB port: Connects MT810 to user computer through USB cable.

2.3 System Requirements

Recommended system requirements for the MT810 are:

1) Processor: Intel-compatible Pentium II 300 or above
2) Memory: 128 MB or above

Caution:

Recommend to use Windows 2000, Windows ME, Windows XP and above Windows 98 SE.

2.4 Hardware Installation

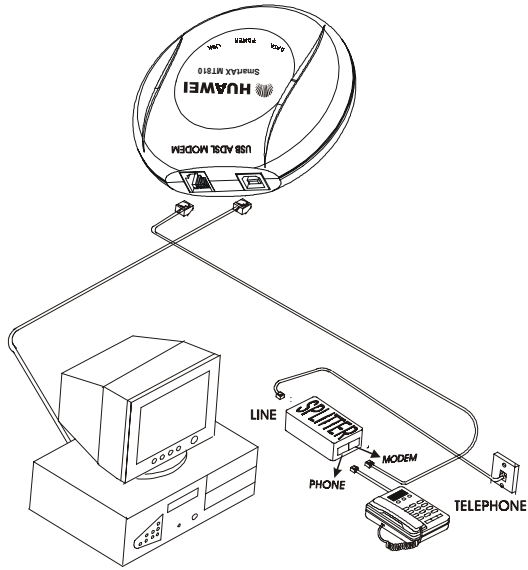


Figure 2-2 Hardware connection illustration

2.4.1 External Splitter

Telephone and modem may interfere with each other. To avoid that, an external splitter is required.

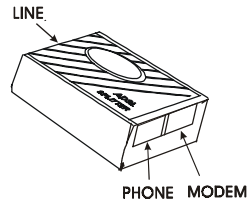


Figure 2-3 External splitter connection

The external splitter has three ports: LINE, MODEM, and PHONE. While using it, ensure to make right connections.

2.4.2 Physical Level Link

Perform the following steps to install the MT810

1) Connect the splitter to wall jack using one telephone cable.
2) Use the other telephone cable to connect “MODEM” port of the splitter and “LINE” port of MT810.
3) Use USB cable to connect “USB” port of MT810 and “USB” port of your computer.

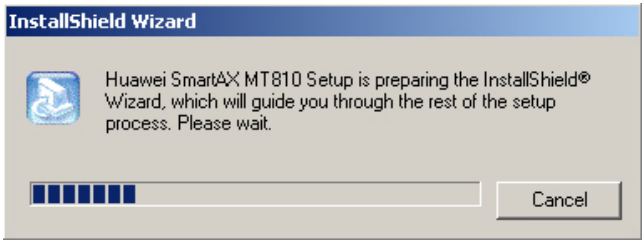
Caution:

Before plugging USB cable into USB port, you must install driver program first. If MT810 has been connected to the computer through USB port, the computer will prompt that new hardware has been found. Then cancel the installation. The detailed installation steps can be referred to “Chapter 3 Software Installation”.

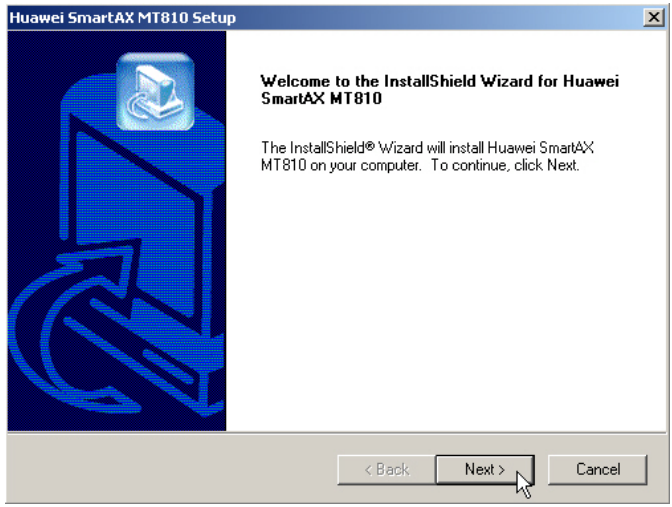
Chapter 3 Software Installation

This chapter will give introduction to the ADSL modem driver software installation for Windows 2000. For other operation system, such as Windows 98, Windows XP, Windows ME, please follow the same procedures. You are recommended to use SETUP.EXE file to install driver program.

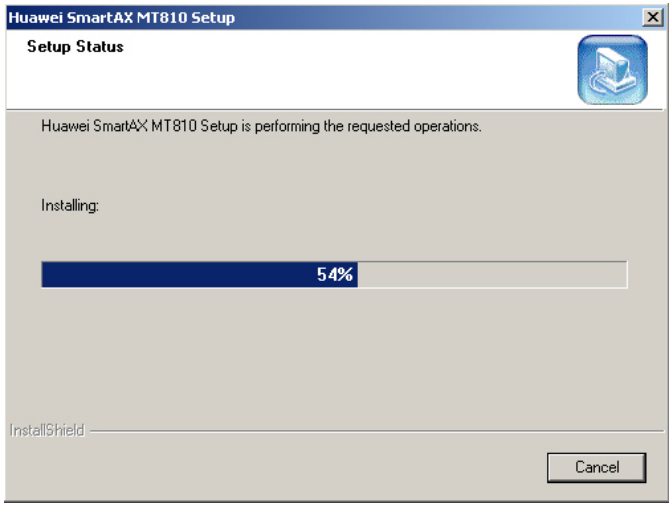
1) Insert the attached installation disk into your CD-ROM and locate “SETUP.EXE” from F:\USB ADSL A\Driver directory (F: is your CD-ROM directory). Double click **SETUP.EXE**.


InstallShield Wizard
Huawei SmartAX MT810 Setup is preparing the InstallShield® Wizard, which will guide you through the rest of the setup process. Please wait.
Cancel

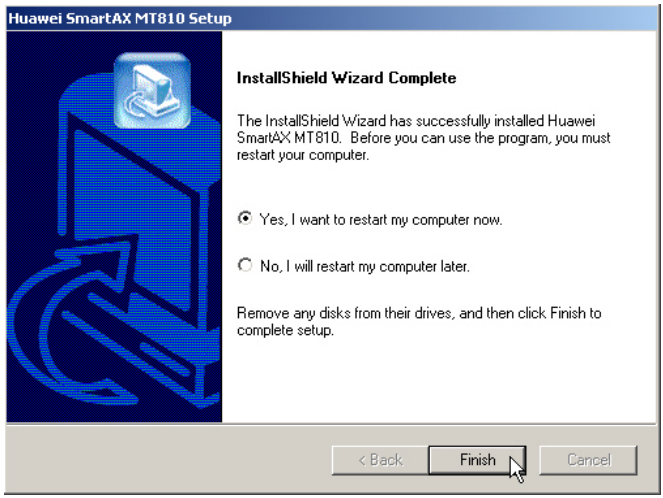
2) After the following window pops up, click **Next**.


Huawei SmartAX MT810 Setup
Welcome to the InstallShield Wizard for Huawei SmartAX MT810
The InstallShield® Wizard will install Huawei SmartAX MT810 on your computer. To continue, click Next.
< Back
Next >
Cancel

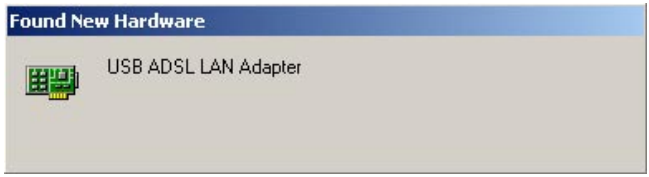
3) Installation is thus started.



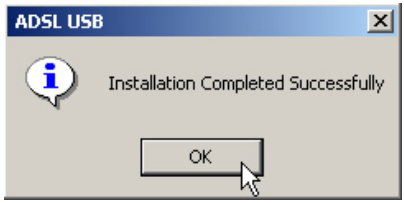
4) After installation, the following window will pop up, select *Yes, I want to restart my computer now*, and click **Finish**.


Huawei SmartAX MT810 Setup
InstallShield Wizard Complete
The InstallShield Wizard has successfully installed Huawei SmartAX MT810. Before you can use the program, you must restart your computer.
Yes, I want to restart my computer now.
No, I will restart my computer later.
Remove any disks from their drives, and then click Finish to complete setup.
< Back
Finish
Cancel

5) After your PC restarted, a message "Found New Hardware" will pop up. Please wait for the installation process to be conducted automatically.



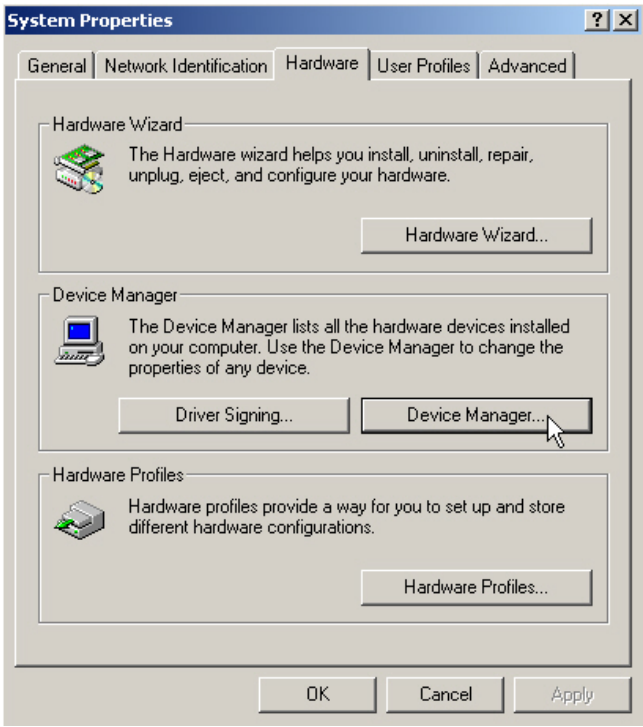
6) When the following dialog box appears, click **OK** to finish the installation.



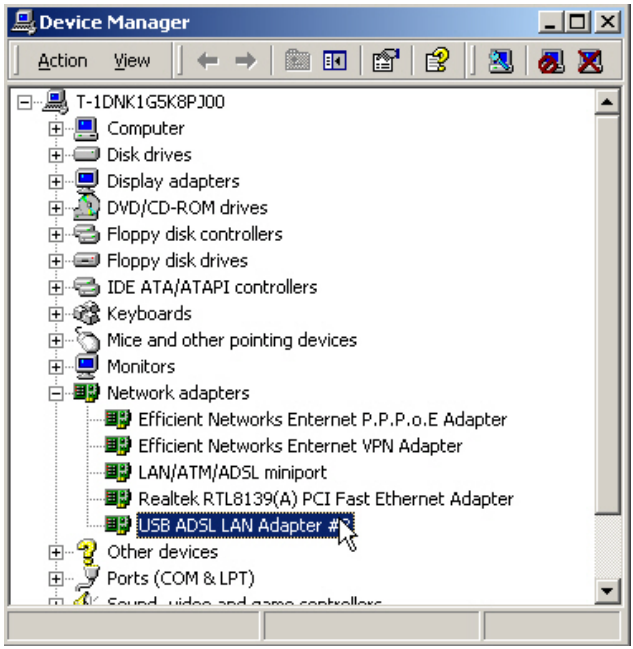
Chapter 4 Installation Confirm

4.1 Installation for Windows 2000 System

1) Click **Start- Settings- Control Panel**.
2) Double click “System” icon, select “Hardware” panel.

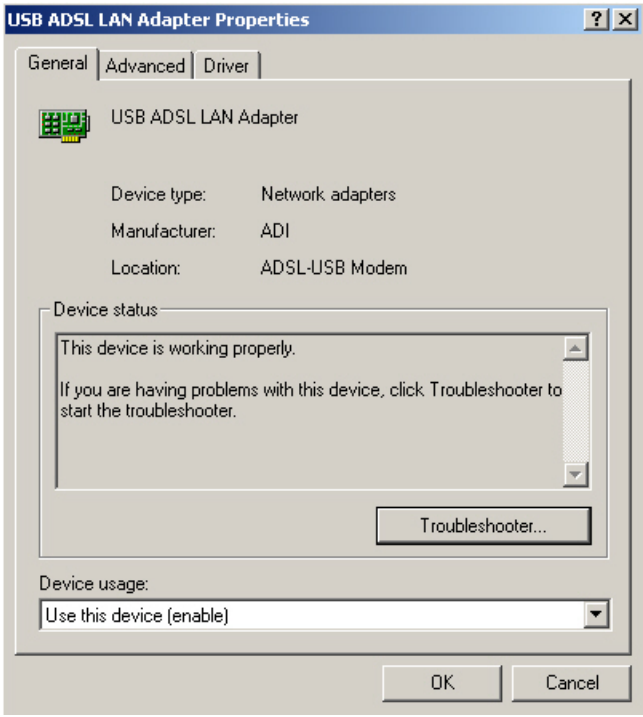

System Properties
General
Network Identification
Hardware
User Profiles
Advanced
Hardware Wizard
The Hardware wizard helps you install, uninstall, repair, unplug, eject, and configure your hardware.
Hardware Wizard...
Device Manager
The Device Manager lists all the hardware devices installed on your computer. Use the Device Manager to change the properties of any device.
Driver Signing...
Device Manager...
Hardware Profiles
Hardware profiles provide a way for you to set up and store different hardware configurations.
Hardware Profiles...
OK
Cancel
Apply

3) Click **Device Manager** to open “Device Manager” window.



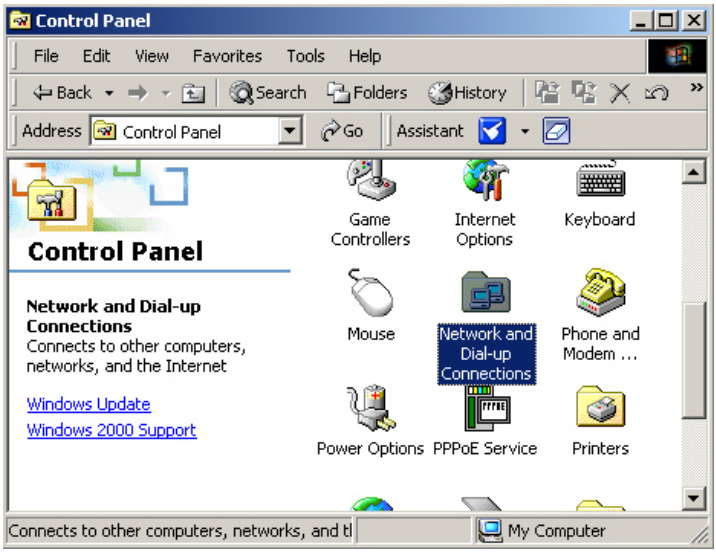
4) Click Network adapters-USB ADSL LAN Adapter. See above.

5) Double click **USB ADSL LAN Adapte**r, “USB ADSL LAN Adapter Properties” window pops up.

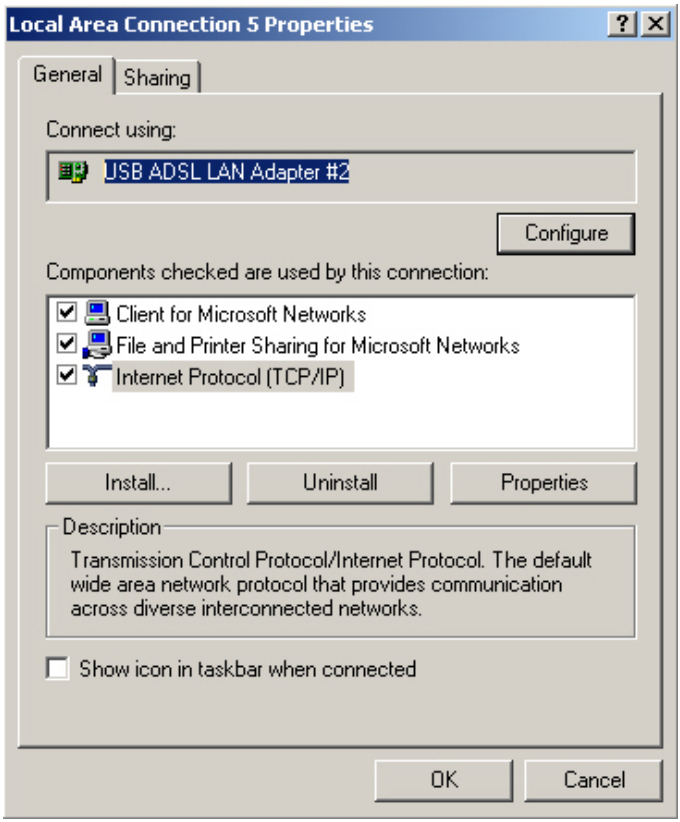


6) If Device status displays: “The device is working properly”, close “USB ADSL LAN Adapter Properties” window, and then return to “Control Panel”

7) Double click **Network and Dial–up Connections** icon (For Windows XP, double click **Network Connections** icon), then double click **Local Area Connections.**



8) If **USB ADSL LAN Adapter** icon appears in “General” window, it indicates that the USB driver has been installed. Click **OK** to close the window.

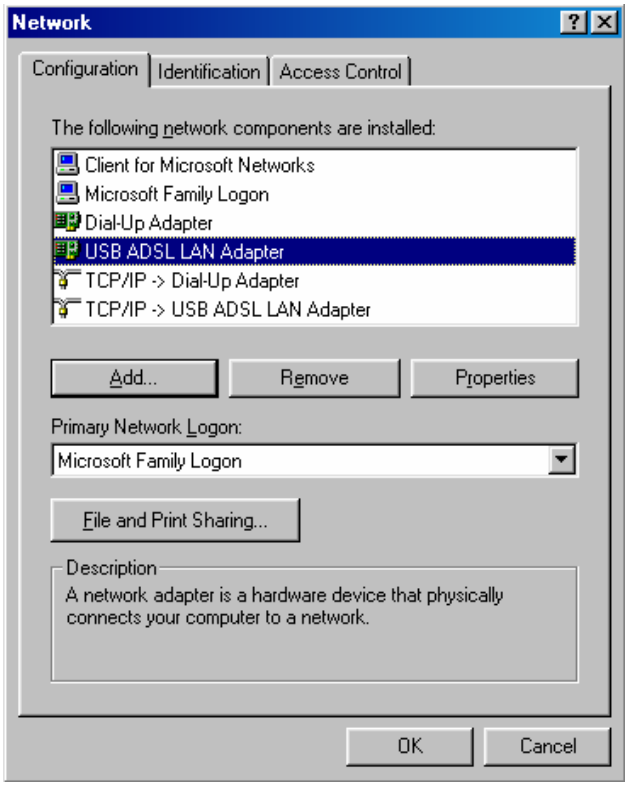


4.2 Additional Details for Windows 98

For checking procedures after the installation in Windows 98, the following parts are somewhat different.

1) Select “Network” icon from “Control Panel” window, and double click it.

2) If “USB ADSL LAN Adapter” icon appears in “Configuration” window, it indicates that the USB driver has been installed, click **OK** to close the window.


Network
Configuration
Identification
Access Control
The following network components are installed:
Client for Microsoft Networks
Microsoft Family Logon
Dial-Up Adapter
USB ADSL LAN Adapter
TCP/IP -> Dial-Up Adapter
TCP/IP -> USB ADSL LAN Adapter
Add...
Remove
Properties
Primary Network Logon:
Microsoft Family Logon
File and Print Sharing...
Description
A network adapter is a hardware device that physically connects your computer to a network.
OK
Cancel

Chapter 5 Customizing Communication Setting

Before setting, please contact your DSL service provider for information such as VPI/VCI, etc. Record the default settings information if the change is unnecessary.

5.1 Software Set up

1) Make sure the device driver has already been installed correctly, after which the icon of ADSL (“ ”) will appear on the right of the system tray, as the following:

2) Double click the icon of ADSL, a message window appears as the following:

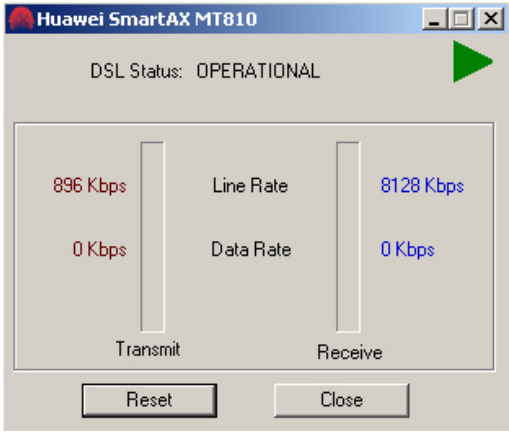
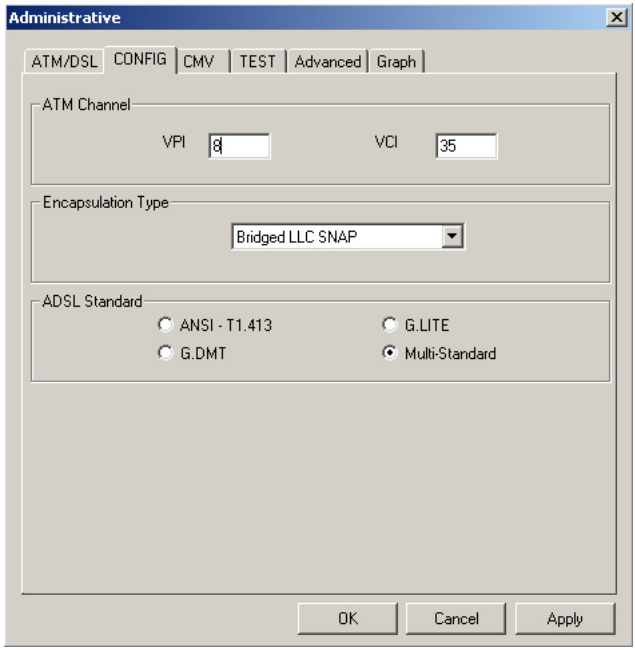


Table 5-1 Parameter description

Information		Description
Line Rate	Transmit	Upstream data rate from ADSL link. (Kbps)
	Receive	Downstream data rate from ADSL link (Kbps)
Data Rate	Transmit	Real time transmitting data rate (Kbps)
	Receive	Real time receiving data rate (Kbps)

3) Use **Alt-D** key to pop up the “Administrative” window, and choose “CONFIG” panel.



We suggest keeping the default settings. You need only to change values of the VPI/VCI or encapsulation type as your DSL service provider offered, and click Apply. The “LINK” LED will flash a while and then keep on. Then you can access the Internet.

5.2 Status Monitor

The icon of ADSL on your desktop indicates the ADSL working state. There are six different colors and their meanings are described as follows:

Table 5-2 Status Monitor

Icon Description	Status Description
(Red icon)	Not working
(Yellow icon)	Communication with loop
(Dark green icon)	Link established but no data transferring
(Light green icon)	Transmitting or receiving data
(Up half light green, down half dark green icon)	Data transmitting in process
(Bottom half light green, up half dark green icon)	Data receiving in process

Chapter 6 Internet Access

6.1 Preparation

The following information may be required for Internet access in different accessing modes. Contact your DSL service provider before further proceedings.

- For PPPoE dial-up mode (common access mode)

PPPoE dial-up application

User Account and Password

- Static IP allocation mode

IP Address

Subnet Mask

Gateway Address

DNS Address

WINS Address

- Dynamically obtaining IP address

No information shall be acquired from your DSL service provider.

6.2 PPPoE Mode

PPPoE is a specification for connecting multiple computer users on an Ethernet to a remote site through common customer premises equipment (CPE). PPPoE combines the Point-to-Point

Protocol commonly used in dialup connections with the Ethernet protocol, which supports multiple users in a Local Area Network.

Caution

Please confirm that the LED **"LINK"** of ADSL Modem is light on, which indicate the physical connections loop already established

A third part software is needed while using PPPoE dialup mode to build an Internet access. For Microsoft Windows 98, Windows 98 SE, Windows ME and Windows 2000 operating systems, a third party software such as "*Enternet 300"* or "*WINPOET "*is needed in PPPoE dialup mode. For Windows XP, the following procedure will be used to build a dial-up connection.

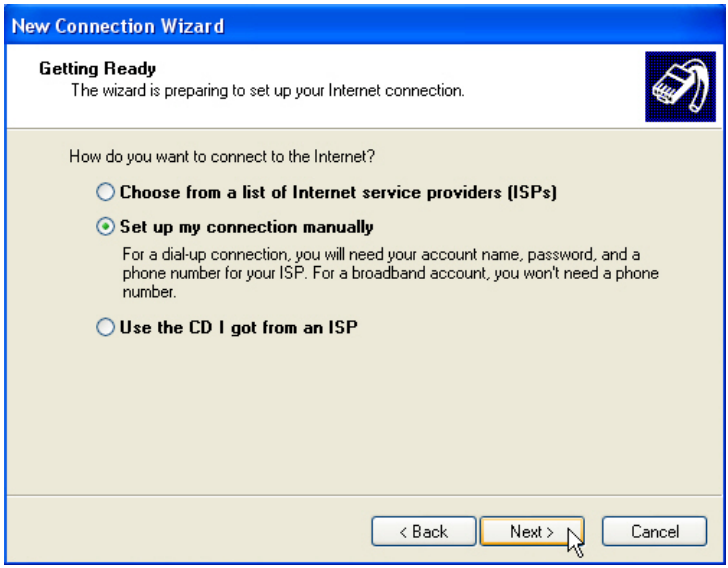
1) Click **Start->All Programs->Accessories->Communications->Network connections**
2) Click *Create a new connection*, a new window will pop up, click **Next**.

New Connection Wizard
Welcome to the New Connection Wizard
This wizard helps you:
• Connect to the Internet.
• Connect to a private network, such as your workplace network.
• Set up a home or small office network.
To continue, click Next.
< Back
Next >
Cancel

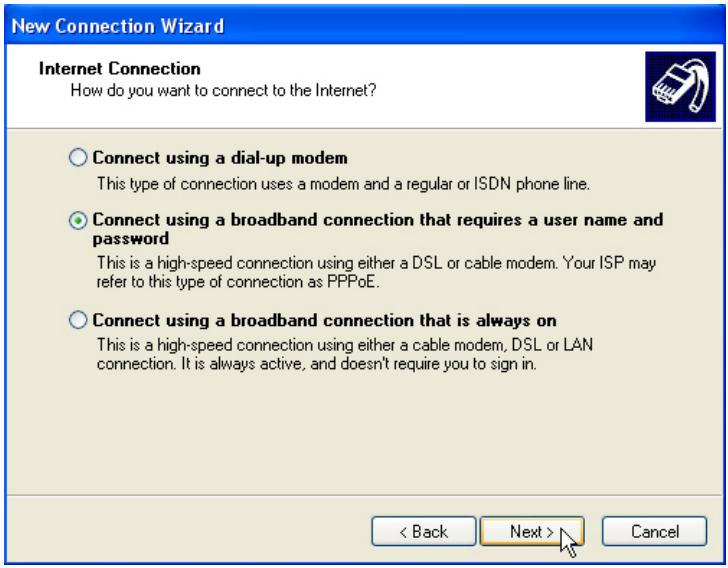
3) Choose *Connect to the Internet*, and click **Next**.

New Connection Wizard
Network Connection Type
What do you want to do?
Connect to the Internet
Connect to the Internet so you can browse the Web and read email.
Connect to the network at my workplace
Connect to a business network (using dial-up or VPN) so you can work from home, a field office, or another location.
Set up a home or small office network
Connect to an existing home or small office network or set up a new one.
Set up an advanced connection
Connect directly to another computer using your serial, parallel, or infrared port, or set up this computer so that other computers can connect to it.
< Back
Next >
Cancel

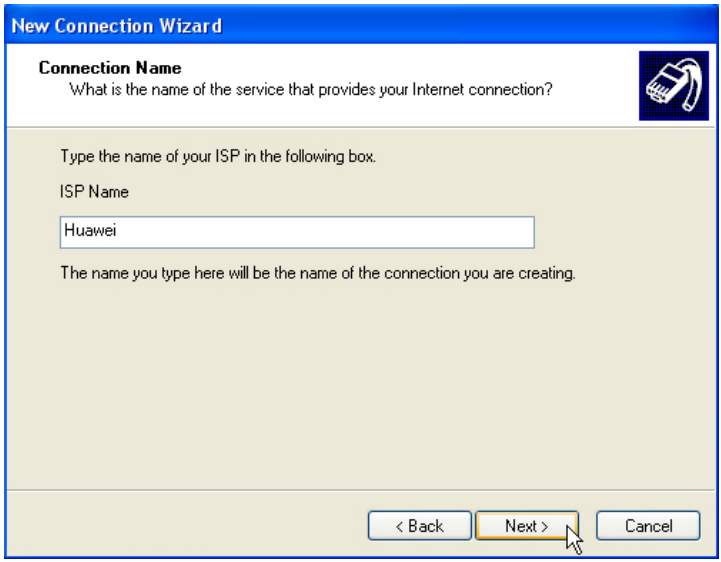
4) In “New connection Wizard” window choose *Set up my connection manually*, and click **Next**.


New Connection Wizard
Getting Ready
The wizard is preparing to set up your Internet connection.
How do you want to connect to the Internet?
Choose from a list of Internet service providers (ISPs)
Set up my connection manually
For a dial-up connection, you will need your account name, password, and a phone number for your ISP. For a broadband account, you won't need a phone number.
Use the CD I got from an ISP
< Back
Next >
Cancel

5) Choose *Connect using a broadband connection that require a user name and password option*, and click **Next**.


New Connection Wizard
Internet Connection
How do you want to connect to the Internet?
Connect using a dial-up modem
This type of connection uses a modem and a regular or ISDN phone line.
Connect using a broadband connection that requires a user name and password
This is a high-speed connection using either a DSL or cable modem. Your ISP may refer to this type of connection as PPPoE.
Connect using a broadband connection that is always on
This is a high-speed connection using either a cable modem, DSL or LAN connection. It is always active, and doesn't require you to sign in.
< Back
Next >
Cancel

6) Enter the DSL SERVICE PROVIDER'S name you want, and click **Next**.


New Connection Wizard
Connection Name
What is the name of the service that provides your Internet connection?
Type the name of your ISP in the following box.
ISP Name
Huawei
The name you type here will be the name of the connection you are creating.
< Back
Next >
Cancel

7) Enter your user name and password then click **Next**.

New Connection Wizard
Internet Account Information
You will need an account name and password to sign in to your Internet account.
Type an ISP account name and password, then write down this information and store it in a safe place. (If you have forgotten an existing account name or password, contact your ISP.)
User name:
huawei001@163.gd
Password:
Confirm password:
Use this account name and password when anyone connects to the Internet from this computer
Make this the default Internet connection
Turn on Internet Connection Firewall for this connection
< Back
Next >
Cancel

8) The following window appears, which indicates that you have completed establishing the connection, choose *Add a shortcut to this connection to my desktop*, and click **Finish**. A shortcut of dial-up connection appears on the desktop.

New Connection Wizard
Completing the New Connection Wizard
You have successfully completed the steps needed to create the following connection:
Huawei
Make this the default connection
This connection is firewalled
Share with all users of this computer
Use the same user name & password for everyone
The connection will be saved in the Network Connections folder.
Add a shortcut to this connection to my desktop
To create the connection and close this wizard, click Finish.
< Back
Finish
Cancel

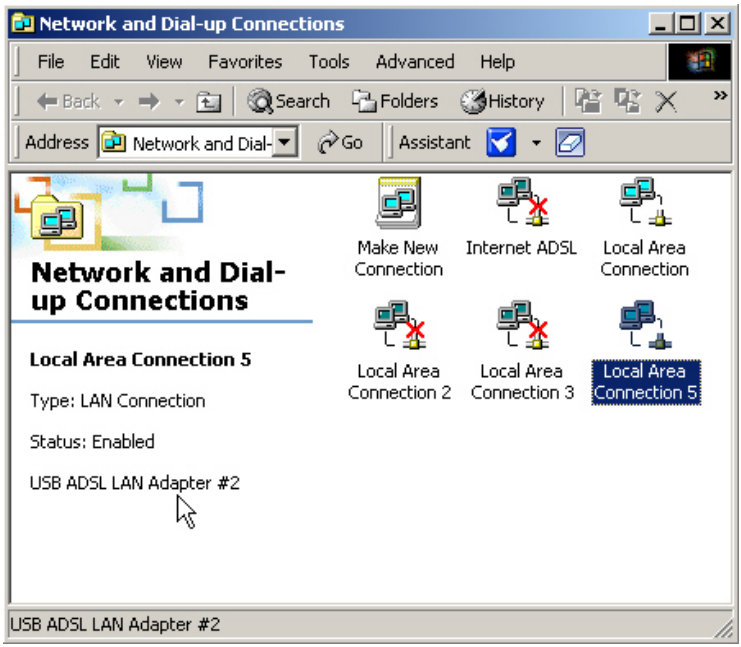
9) Double click the icon of dial-up connection, a massage window pops up. Click **Connect**.

10) When the window of the dial-up connection disappears, in system tray, a small icon as follows will indicate the connection is built successfully.

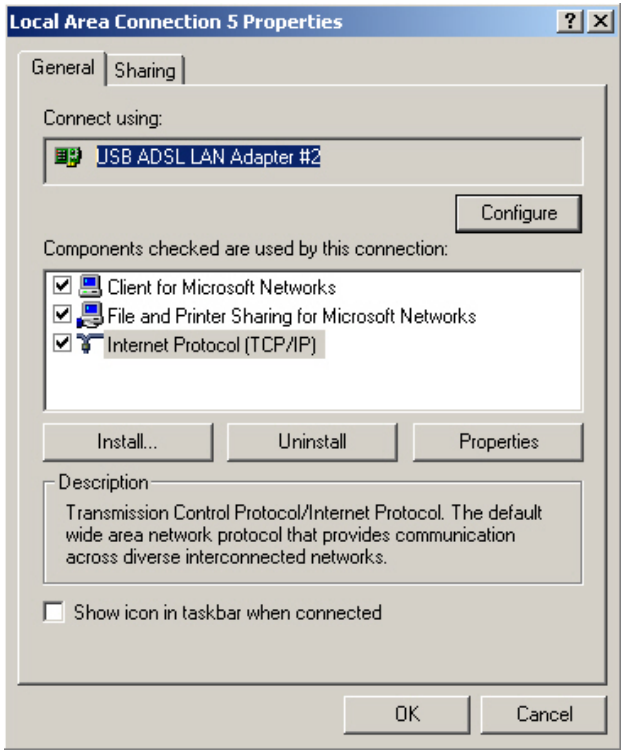
6.3 Static IP Address Mode

Use Windows 2000 as an example, the setting procedures in other operating systems are similar with the following description. In static IP address mode, if your DSL service provider has specified the IP and DNS address information, the following procedures can be used to configure TCP/IP properties.

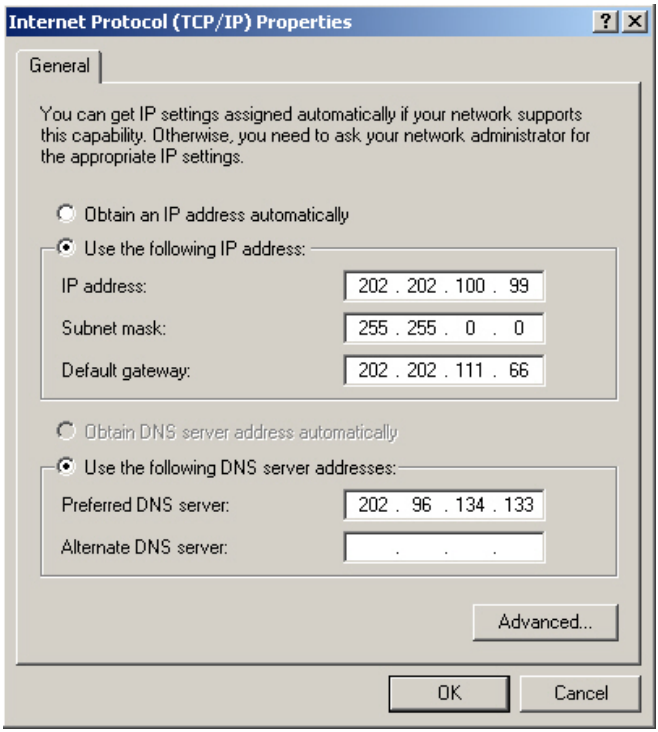
1) Click **Start->Settings->Network and Dial-up connections**, choose the icon of “Local Area Connection” whose associated equipment is “USB ADSL LAN Adapter”.


Network and Dial-up Connections
File Edit View Favorites Tools Advanced Help
Back Search Folders History
Address Network and Dial- Go Assistant
Network and Dial-up Connections
Local Area Connection 5
Type: LAN Connection
Status: Enabled
USB ADSL LAN Adapter #2
Make New Connection
Internet ADSL
Local Area Connection
Local Area Connection 2
Local Area Connection 3
Local Area Connection 5
USB ADSL LAN Adapter #2

2) Double click **Local Area Connections** to open “Local Area connections Properties” window. Then double click **Internet Protocol (TCP/IP)**



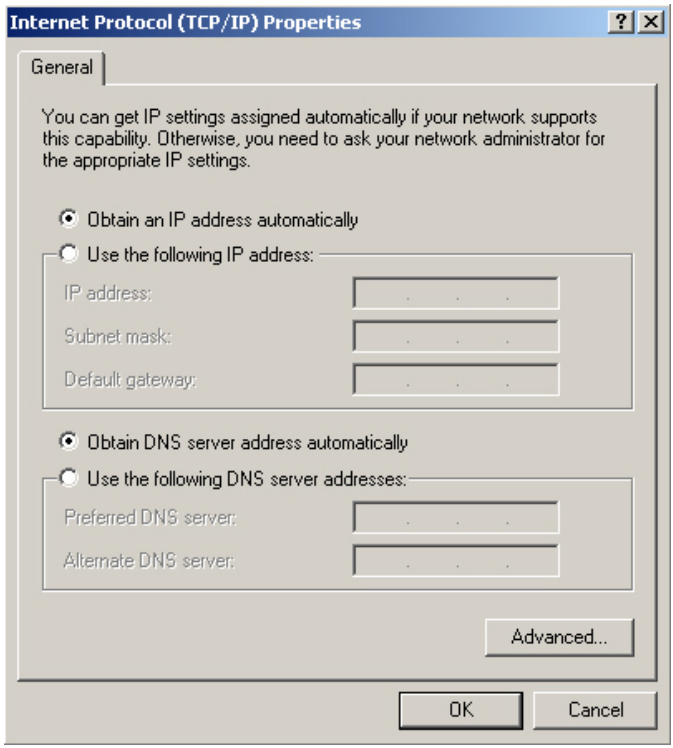
3) "Internet Protocol TCP/IP Properties" window will pop up, select *Use the following IP address* and enter the IP address Subnet mask and default gateway in the space provided, select *Use the following DNS service address* and enter the DNS service address.


Internet Protocol (TCP/IP) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address: 202 . 202 . 100 . 99
Subnet mask: 255 . 255 . 0 . 0
Default gateway: 202 . 202 . 111 . 66
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server: 202 . 96 . 134 . 133
Alternate DNS server:
Advanced...
OK
Cancel

4) Click **OK** to close “Internet protocol (TCP/IP) properties” windows, all settings will be saved.

6.4 Dynamical IP Address Assigning Mode

The setting procedures are similar with those of “Static IP Address mode”. Open “Internet Protocol (TCP/IP) Properties” window, select *Obtain an IP address automatically* and *Obtain DNS service automatically*, click **OK** to close “Internet protocol (TCP/IP) Properties” window, all settings will be saved.


Internet Protocol (TCP/IP) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address:
Subnet mask:
Default gateway:
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:
Advanced...
OK
Cancel

Chapter 7 Questions & Answers

Question 1: When connecting to WAN (Wide Area Network), the message appears that PVC connections failed, why?

Answer:

1) Check the connections between ADSL modem and telephone line.
2) If you ensure the connection has no problem, proceed to check the VPI and VCI Parameters. Change these settings if they are inconsistent with the information your DSL service provider provides.

Question2: Compare with using ADSL modem independently, why I have slower speed while using modem and phone at same time?

Answer: To separate the data signal and voice analog signal, a splitter is necessary. It has three ports: PHONE, LINE, MODEM; make sure the connection is correct.

Question 3: Why sometimes the access speed is not faster than dial-up modem?

Answer: There are several reasons:

1) If you visit an oversea website, your speed will be limited by the export bandwidth and the configurations on the server side.

2) ADSL modem is multimode, that is, it automatically determines the type of modem at the central office and configures itself accordingly. Once the correct mode is determined, the modem automatically determines the optimal data rate for the line. It depends on the type of modem at the central office and the loop condition.

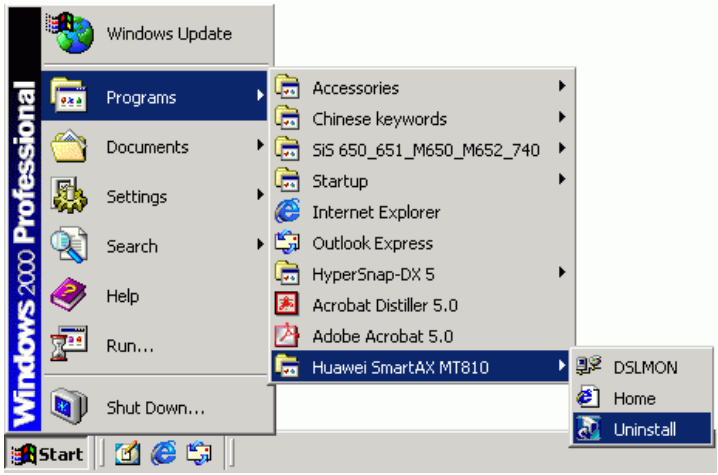
Question 4: Why browsing web page is slow after ADSL CPE and Enternet300 have been installed?

Answer: This is because Internet connection wizard points to a wrong connection. Enternet300 uses Local Area Network virtual dial-up, but the IE default is using normal dial-up when browsing a web site. IE will seek the dial-up interface first, and then seek proxy in Local Area Network, lastly point to Enternet300 interface, which would make it slow. You need to run the Internet connect wizard to point to LAN mode and disable the proxy so as to solve the problem.

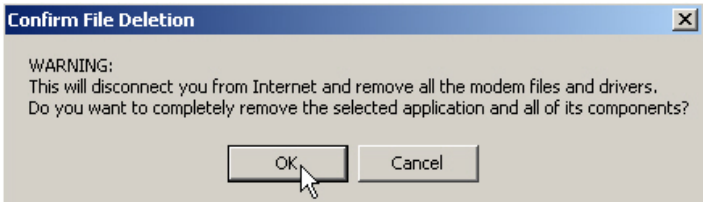
Chapter 8 Software Uninstall

Remove the USB ADSL Modem software drivers by performing the following steps:

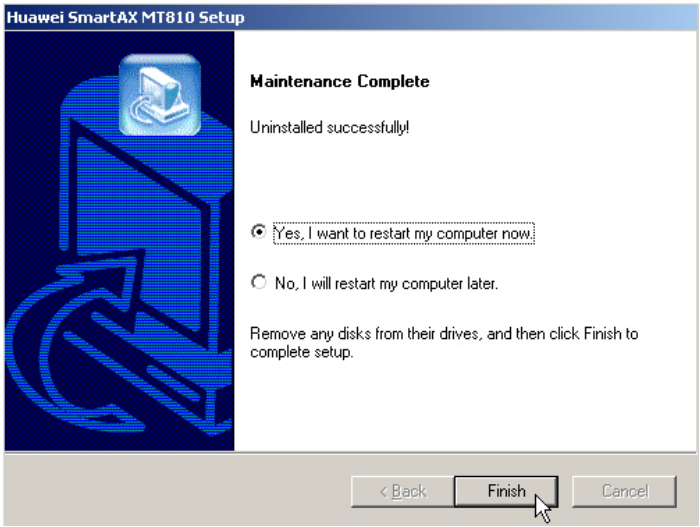
1) Chose **Start–>Programs–>Huawei SmartAX MT810–> Uninstall**.



2) Click **OK** to confirm files deletion.


Confirm File Deletion
WARNING:
This will disconnect you from Internet and remove all the modem files and drivers.
Do you want to completely remove the selected application and all of its components?
OK
Cancel

3) Wait until the "Huawei SmartAX MT810 Setup" window pops up. Select the *Yes, I want to restart my computer now,* and click **Finish**.


Huawei SmartAX MT810 Setup
Maintenance Complete
Uninstalled successfully!
Yes, I want to restart my computer now.
No, I will restart my computer later.
Remove any disks from their drives, and then click Finish to complete setup.
< Back
Finish
Cancel

4) A notification message pops up, remove the MT810, Click **OK,** and restart your computer now.